



**Terrain Development
Division**

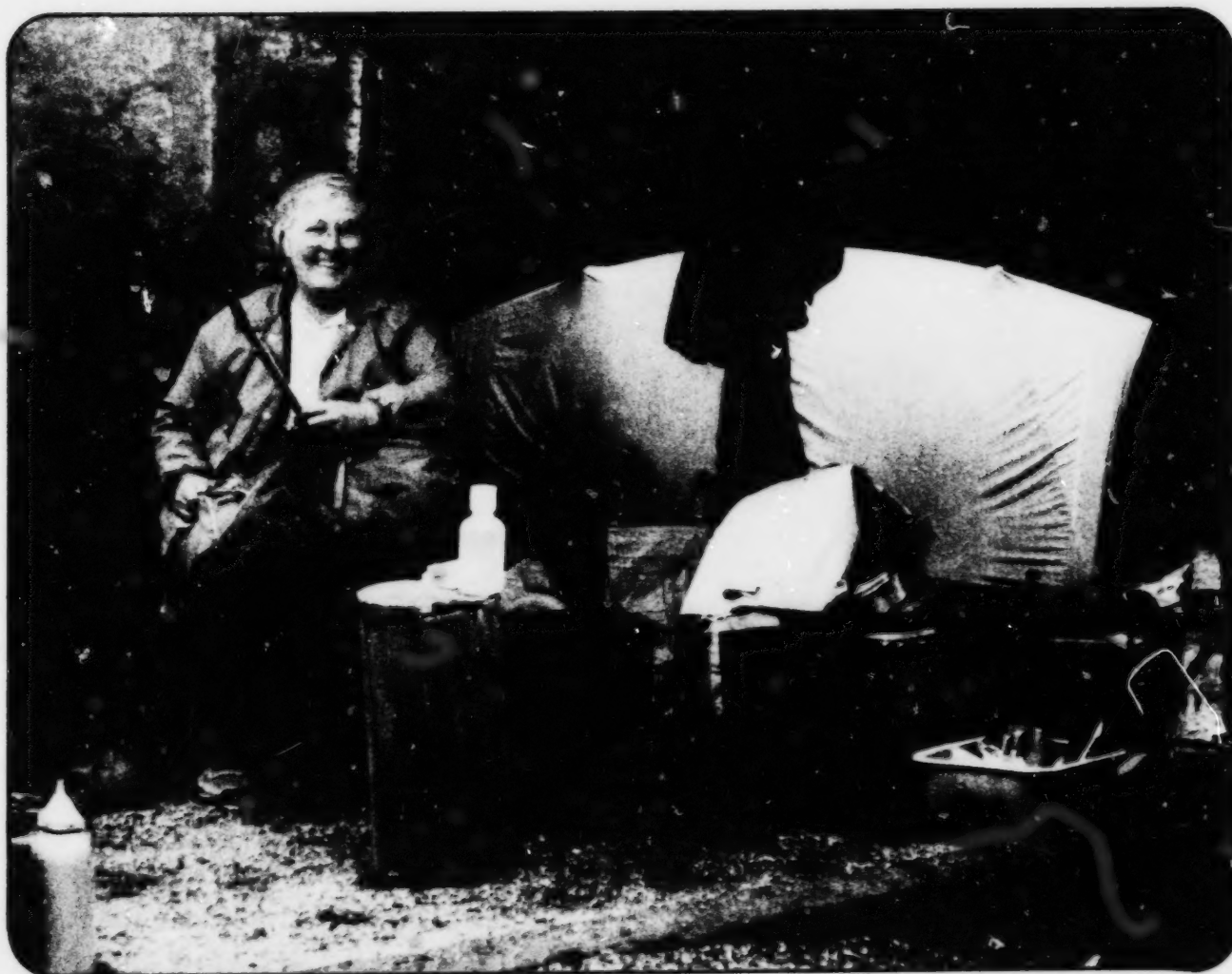
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Environment Canada
Western Region

**Division, Aménagement
du Paysage**

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WESTERN REGION CAMPGROUND REPORT KOOTENAY NATIONAL PARK





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91-03119/



WESTERN REGION CAMPGROUND REPORT

KOOTENAY NATIONAL PARK

REGIONAL CAMPGROUND REPORT

EXECUTIVE SUMMARY

This report is a component of the regional campground study completed in 1989. It outlines the required recapitalization work and an implementation framework for the three campgrounds within Kootenay National Park. The report has been prepared in a Project Brief format and can be adapted to either a Capital Project or Operational and Maintenance Task. The summary of costs are in 1989 dollars and are itemized as Architectural, Engineering and Landscape Work.

The study was intended to substantiate the costs of work required as a result of site investigations, interviews and various Management Planning and Visitor Services Studies. Architectural and Engineering Services have compiled a complete record in 1987, and 1988 of the individual campgrounds inventory and have completed a condition rating system. The inventory and condition report were utilized to prepare cost estimates for recapitalization in the three campgrounds in Kootenay National Park. The total number of universal campsites to be recapitalized are 401 sites and are estimated to cost 3.18 million dollars. The report was not intended to address issues of cost recovery. General Works' issues were included in the costs as an ongoing expenditure which is addressed.



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WESTERN REGION CAMPGROUND REPORT

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Canadian Parks Service

Environnement Canada
Service canadien des parcs

EARP REQUEST

Before an EARP can be initiated, the following information must be provided.

Your conscientious participation will assist in the environmental screening while ensuring that your project is not held up due to insufficient information.

If project is capital please attach a copy of the PIP form.

Project Title: Kootenay Campground Recapitalisation - Redstreak Campground

= = = = =
= FOR WARDEN SERVICE USE ONLY

= Person Requesting: V. L. Herzog

= EARP Registration No.: _____

= Agency: A&E Services, Western Region

= Project Warden: _____

= Title: Landscape Architect

= Date Received: _____

= Date Submitted: January 1989

= Completion Date Committed: _____

= Requested Completion Date: _____

= = = = =
Cost of Project: _____

Are Project Funds/PY identified: NO

The Issue: Redstreak Campground has been inventoried as to recapitalisation requirements.

Parts of the building component are in need of recapitalisation; utilities are at an age where at minimum they should be monitored; and despite landscape rehabilitation several years ago, some major redesign of sites, spurs, and activity pads is required in order to maintain the resource.

Proposal: The attached project brief outlines, work which is required to upgrade the buildings, and start utility assessment. It also discusses recapitalisation requirements the sites and roads.



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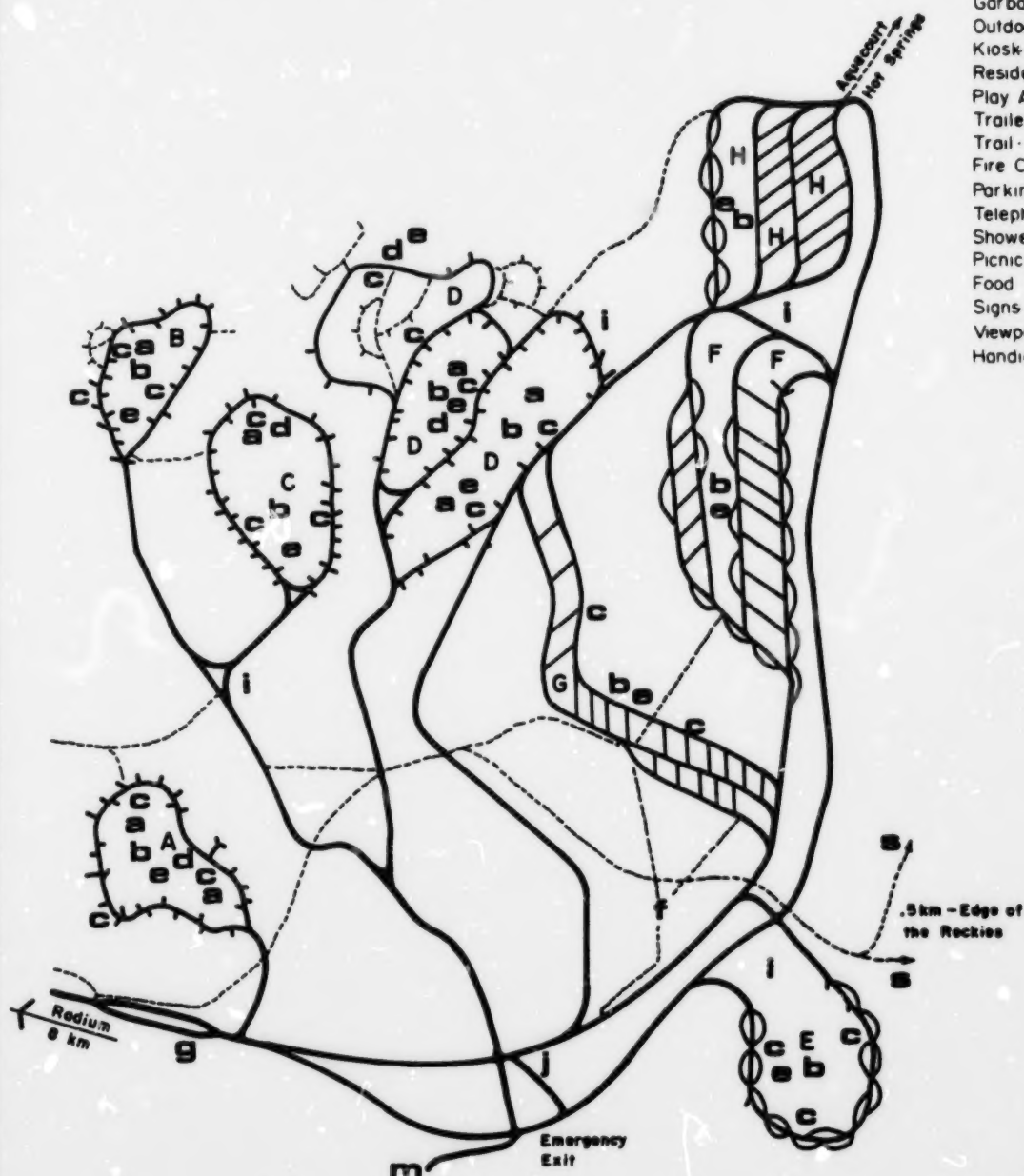
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WESTERN REGION CAMPGROUND REPORT

LEGEND

Kitchen Shelter	a
Washrooms	b
Well / Water Standpipe	c
Wood Bin	d
Garbage	e
Outdoor Theatre	f
Kiosk	g
Residences	h
Play Area	i
Trailer Dump Station	j
Trail	k
Fire Circle / Pit	l
Parking	m
Telephones	n
Showers	o
Picnic Area	p
Food Storage	q
Signs	r
Viewpoint	s
Handicap Washroom	t



Redstreak Campground - KOOTENAY



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WESTERN REGION CAMPGROUND REPORT

ENVIRONMENT CANADA - PARKS

WESTERN REGION

PROJECT BRIEF

for

REDSTREAK CAMPGROUND

KOOTENAY NATIONAL PARK

PREPARED BY: V. L. Herzog

DATE: January 1989..... REVISION NO. PROJECT NO.

EXECUTIVE SUMMARY:

As part of the Regional Campground Study, Redstreak Campground which consists of 50 fully serviced sites, 38 semi serviced sites, and 154 unserviced sites was inventoried as to condition and recapitalisation requirements. This Project Brief sets forth a rehabilitation, plan for the campground. the scope of work includes site rehabilitation, building renovations, utility improvements, road repair and site furnishings.

NOTE: For the purposes of saving costs and bulk all Appendices mentioned in the Campground study are held as one copy in A&E Services, Western Region.

APPROVALS:

CLIENT

F. Bamber
Superintendent

Date

C. Bjorgan
Chief Visitor Services

Date

ARCH. & ENG.

L.G. Blight
Director

Date

T. C. Arnett
Coordinator
Terrain Development

Date



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

A. INTRODUCTION

As part of the Regional Campground Study, Redstreak Campground was analysed as to conditions and requirements for recapitalisation.

B. SCOPE OF PROJECT

The project brief identifies work which is required for building, utility and campsite work in order to bring them to national Standard. The existing Campground Manual PM 40 - 4 is being revised in order to bring it in line with current recapitalisation practice.

C. OBJECTIVES

The objectives are to upgrade the campground to a presentable and functional state, and to improve the buildings and sites to national codes and standards.

D. URGENCY

The urgency was established by review of the condition report, site analysis, and park prioritisation. These reports, indicated that most of the work required is of and immediate priority (work needed in the next one - five years). In most cases the work is required within the next two years.

E. JUSTIFICATION

Many of the components which make up the plant at Redstreak Campground are becoming worn. The Buildings are in need of some major upgrading, the Utilities show some signs of deterioration and should be investigated as a precautionary measure, and the Landscaping and Roads require upgrading. Although the hard surfaced paths which were put in some eight years ago have helped to eliminate some of the trampling problems, poor original campground layout and changing camping patterns (especially in the type of vehicles which are used) have combined to cause site degradation in the campground. The addition of more paths in some of the fully serviced loops may help to



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

E. JUSTIFICATION

alleviate trampling in these areas. Similar to other campgrounds, areas which receive a great deal of tenting are very trampled in Redstreak. This may be corrected by enlarging the campsites, levelling, and improve campsite materials. Campsites for the disabled have been identified in the Draft Visitor Activities Management Plan. Five fully serviced and Five semi-serviced sites have been identified. Related services such as washrooms, paths, and Interpretative Theatre should be upgraded to meet the needs of the disabled. Site analyses, and project definition must be addressed in all cases in order to identify related costs.

F. OPTIONS

In order to maintain the level of service which the visitor enjoys at Redstreak Campground, roads and campsites are in need of upgrading. The building component should be upgraded so that life can be added onto the structures. Electrical in the buildings should be inspected as to whether they meet code or not. Each one of these elements should be reviewed by the Park and the A&E services at a more detailed level in order to establish a range of options for the work.

G. SOCIO - ECONOMIC INFORMATION

Redstreak Campground is very popular. In the months of July and August it is usually filled to capacity, with private campgrounds in the area taking up the slack. The Kootenay Park Management Plan addresses the issues of environmental management and private sector enterprise as being limiting factors to expansion of Redstreak Campground. At this time, Redstreak serves the camping public well in the summer months with overflow using the private sector campgrounds. The shoulder season is managed by allowing the private sector to meet the camping public's needs. The added fact that Elk and Big Horn Sheep winter on the Redstreak Bench has resulted in The Kootenay Park Management Plan directive that no expansion take place at Redstreak Campground. Although Redstreak has a number of tenting sites, they should be enlarged and upgraded, as they are compacted, uneven, and encourage trampling of the surrounding area.



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WESTERN REGION CAMPGROUND REPORT

2.0 GENERAL INFORMATION

A. BACKGROUND

Redstreak Campground is located in Kootenay National Park, approximately .4 km from Administration building, and 4 km from the town of Radium. From the Campground it is 1.6 km walking distance to Radium Hotsprings, and approximately 8 km driving distance. The months of July and August saw 30.66% and 32.4% vacancy rate. June had a 67.5% vacancy rate.

The required improvements were documented from on site inspections and meetings to review and identify the problems within the Campground. the Park and Landscape Architect prepared a preliminary User requirements Check List. These were then prioritized. A condition analysis was carried out concurrent with the User Requirements check List, and was integrated into a set of required work for the campground. The required work have Class 'C' dollar associated with them.

B. SOURCES OF INFORMATION

Kootenay National Park

Visitor Services
General Works
Warden Service
Interpretation

Campground Analysis

Jasper Field Crew
A&E Services,
Western Region

Reports and Manuals

A&E Services
Water Supply for
Western Region's Campgrounds

Four Mountain Parks
Management Plan
CPS, Western Regional Planning

Draft Visitor Activity
Management Plan for Kootenay
(PS, Western Region)

Campground Manual

PM 40 - 4 being revised



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WESTERN REGION CAMPGROUND REPORT

2.0 GENERAL INFORMATION

C. GENERAL CAMPGROUND CRITERIA

Design Criteria (from Parks Canada Campground Manual)

i. Fully Serviced (Level 1)

- . Sites complete with water, sewer, and electrical
- . Centralised flush toilet/shower buildings

Density of Campground	8 - 18 sites/hectare
People/Campground	1 - 8 people/campsite
Capacity	50 sites

ii. Fully Serviced (Level 2)

- . 38 sites electrical hook ups only
- . Centralised sanitary water and sewage disposal facilities provided.

Density of Campground	8 - 18 sites/hectare
People/Campground	1 - 8 people/campsite
Capacity	38 sites

iii. Semi Serviced (Level 2)

- . Tent and trailer camping sites with no utility hook-ups.
- . Centralised sanitary water and sewage disposal facilities provided

Density of Campground	8 - 18 sites/hectare
People/Campground	1 - 8 people/campsite
Capacity	154 sites



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WESTERN REGION CAMPGROUND REPORT

3.0 REQUIREMENTS AND CONSTRAINTS

A. MAJOR WORK ITEMS

i. Buildings

- . Painting, electrical upgrading, reroof kitchen shelters
- . Replace some seating and paint required Amphitheatre
- . Air conditioning and carpeting upgrade required Kiosk
- . Hot water, furnaces, exhaust fans, and toilet partitions required Shower/Washroom Buildings

NOTE: That further assessment of the building component will be required by the A&E Architectural Group prior to a final building estimate being developed. All estimates given for buildings herein Class 'D' level estimates.

ii. Utilities

- . Investigation of the Sewer and Grey Water systems is required

iii. Roads

- . Resurfacing of the some of the roads
- . Pot hole filling

iv. Landscaping

- . New trails in the Fully Serviced portions of the Campgrounds particularly adjacent and in close proximity to buildings.
- . Campsite, spurs, and site rehabilitation, campsite redesign
- . Replace stoves
- . Miscellaneous Site Work: tables, markers, drains,
- . Gravel hiking trail
- . New entry gates
- . Orientation Signage
- . Replace all non concrete end tables with concrete end tables
- . Upgrade campgrounds

v. Interpretation

- . Orientation signage throughout the campground is required



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WESTERN REGION CAMPGROUND REPORT

3.0 REQUIREMENTS AND CONSTRAINTS

vi. Operations and Maintenance

- Operations and Maintenance is a recurring cost. At this time maintenance items are constantly changing and revolve around items such as painting, site markers, draining lines, cleanliness and a host of other activities. In any development that takes place, whether new or recapitalised, the maintenance implications must be addressed.

4.0 PROJECT MANAGEMENT

A. ORGANISATION

Project Officer	A&E Services Western Region	
Park Staff	F. Bamber Superintendent	
	C. Bjorgan Visitor Services	K. Slovak General Works
	P. Whyte Warden Service	I. Jack Interpretation
Asset Management	Jasper Field Crew A&E Services, Western Region	

B. PROCUREMENT STRATEGY

The project work shall be broken out into three components covering Buildings; Landscape and Road Work, and Utilities.

Buildings	Consultant Design In House Supervision
Utilities	In House Evaluation & Report
Landscape & Road Work	In House/Consultant Design



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C. SCHEDULING

1987/88	Condition Analysis
1988/89	Project Brief
1989 — \	Year 1 - Building and Utility Design
/	Year 2 - Building Construction
	- Landscape and Road Work Design
	Future - Landscape and Road Work Construction
	Possible Utility Upgrade

D. FUNDING - CLASS 'C' ESTIMATE - 1988\$

<u>Buildings</u> (Class D)	<u>Year 1</u>	<u>Year 2</u>	<u>Future</u>
Construction		107.3	
Design	14.0		
Contingency 20%	2.8	21.5	
Risk 20%	2.8	21.5	
Engineering	5.0	25.0	
<u>Utilities</u>			
Design	3.0		Possible
Contingency 15%	.5		Dollars
Risk 15%	.5		
Engineering	5.0		
<u>Landscape & Road Work</u>			
Construction	.6		979.9
Design		98.0	
Contingency 15%		14.7	147.0
Risk 15%		14.7	147.0
Engineering		5.0	50.0
<u>TOTAL</u>	<u>34.4</u>	<u>307.7</u>	<u>1323.9</u>



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
1. BUILDINGS							
Paint and replace boards on outdoor seating in the Amphitheatre	1	1 amphi	1.0000		1.0		
Replace old and stained carpeting in the Kiosk	1	1 bldg.	.5000		.5		
Replace old and worn out air conditioning the Kiosk	1	1 bldg.	.5000		.5		
Replace cedar shake roofs on kitchen shelters	1	7 bldg.	2.5000		17.5		
Check electrical Kitchen Shelters	1	7 bldg.	.5000		3.5		
Replace old fixtures and secure switching gear. Inspection required.	1	1 inspect. report	3.0000		3.0		
Paint Ceilings, columns and walls Kitchen Shelters	1	3 bldg.	.4000		1.2		
Replace hot water and furnaces in Shower/Washroom Buildings		9 bldg.	1.2000		10.8		
Replace exhaust fans.	1	9 bldg.	.5000		4.5		
Replace Toilet partitions	1	56 cubiles	.8000		44.8		
		20 screens	.2500		5.0		
Miscellaneous building repairs various buildings - total of 3 buildings	1	3 bldg.	2.000		6.0		
Upgrade electrical all Shower/toilet buildings	1	9 bldg.	1.0000		9.0		
Design				14.0			
Contingency 20%				2.8	21.5		
Risk 20%				2.8	21.5		



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
1. BUILDINGS continued							
Engineering 1.8 x 55.5 .3 PY				5.0	25.0		
2. UTILITIES							
Sewer System investigation. Roots have been found in system from time to time	1	1 system	1.5000	1.5			
Investigation of Grey Water System	2	1 system	1.5000	1.5			
Contingency 15%				.5			
Risk 15%				.5			
Engineering 1.8 x 55.5 x .05 PY				5.0			
3. LANDSCAPE & SITE WORK							
Concrete drain required on water standpipe	2	1 drain	.1500	.2			
Replace stoves	1	75 stoves	.1300			9.8	
Upgrade Tent Pads . min. regrade & adj. rehab, new pad material	1	111 tent pads	1.0000			111.0	
. maj. regrade & adj. rehab, new pad material	1	43 tent pads	2.0000			86.0	
Upgrade Spurs . minor grading & adjacent rehabilitation	1	140 spurs	1.0000			140.0	
. major grading & adjacent rehabilitation	1	88 spurs	2.0000			160.0	



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
3. LANDSCAPE continued							
Upgrade sites . minor grading & adjacent rehabilitation	1	127 sites	.8000			101.6	
. major grading & adjacent rehab.	1	43 sites	1.2000			51.6	
Replace site marker	1	1 marker	.0060	1			
Straighten site markers	1	14 markers	.0015	2			
Straighten site markers	1	14 markers	.0015	.2			
Repair Tables . new table leg . Replace board	1	1 leg 1 brd	.0075	.1			
Fill pot holes	1	300 M2	.0018			5.4	
Asphalt gravel trails similar to those previously Asphalted	1	350 M2	.0018			6.3	
Minimize site trampling in loops H, F, G, E by adding Asphalt similar to those done previously	1	3500 M2	.0018			63.0	
Loop D Sites too close together redesign loop thi work is in addition to that identified elsewhere	1	62	1.0000			62.0	
Improve circulation with improved signage loop D	1	study/ signs	5.0000		5.0		



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRJORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
3. LANDSCAPE continued							
Investigate layout loops ABCD in order to rehabilitate central areas Inventive design solution needed here as straight planting will be insufficient Previous trail work should be re-evaluated as a part of this solution - most work proved effective, but some alterations to the concept should be considered.	1		2.0000		2.0		
		constr't				25.0	
The Hiking trail should be graveled	1	2500 M2	.0012			30.0	
New entry gates required	1	2	3.5000			7.0	
Orientation signage required	1	30 various signs	.2000			6.0	
Replace non - concrete end table with concrete end	1	59 tables	.3500			20.7	
Fire circles required in electrical site areas	2	3	.5000			1.5	
Upgrade Playgrounds	1	3	1.0000			3.0	
Resurface roads subject to investigation and design.	2	5000 M2	.0018			90.0	
Design					98.0		
Contingency 15%					14.7	147.0	



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DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
3. LANDSCAPE continued							
Risk 15%					14.7	147.0	
Engineering 1.8 x 55.5 x .52 PY					5.0	50.0	
Provision of Fire (Camp stoves) pits to all sites has been discussed - this item is shown as a cost only & is not factored into the overall costs	3	88	.0130				114.4
Disabled sites asphalt paths asphalt sites asphalt spurs table, firepit wood storage shown as cost only not included in overall totals. Other related services not evaluated at this time as location and project definition to be defined.	1	10	4.6000				46.0
TOTAL				34.4	307.7	1323.9	1666.6



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WESTERN REGION CAMPGROUND REPORT

REDSTREAK CAMPGROUND KNP





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Environment Canada
Canadian Parks Service

Environnement Canada
Service canadien des parcs

EARP REQUEST

Before an EARP can be initiated, the following information must be provided.

Your conscientious participation will assist in the environmental screening while ensuring that your project is not held up due to insufficient information.

If project is capital please attach a copy of the PIP form.

Project Title: Kootenay Campground Recapitalisation - McLeod Meadows Campground

= = = = =
= FOR WARDEN SERVICE USE ONLY

= Person Requesting: V. L. Herzog

= EARP Registration No.: _____

= Agency: A&E Services, Western Region

= Project Warden: _____

= Title: Landscape Architect

= Date Received: _____

= Date Submitted: January 1989

= Completion Date Committed: _____

= Requested Completion Date: _____

= = = = =
Cost of Project: _____

Are Project Funds/PY identified: NO

The Issue: McLeod Meadows Campground was inventoried as to recapitalisation requirements in the course of the Campground Study. Buildings, Utilities, and Landscape & Road Work all require some degree of recapitalisation.

Proposal: The attached Project Brief outlines the work required to upgrade the water system to a well water pressure system, improve and investigate septic fields and tanks, improve buildings and building services (eg lighting), construction of a shower building, trail work rip rapping, and other miscellaneous site work.



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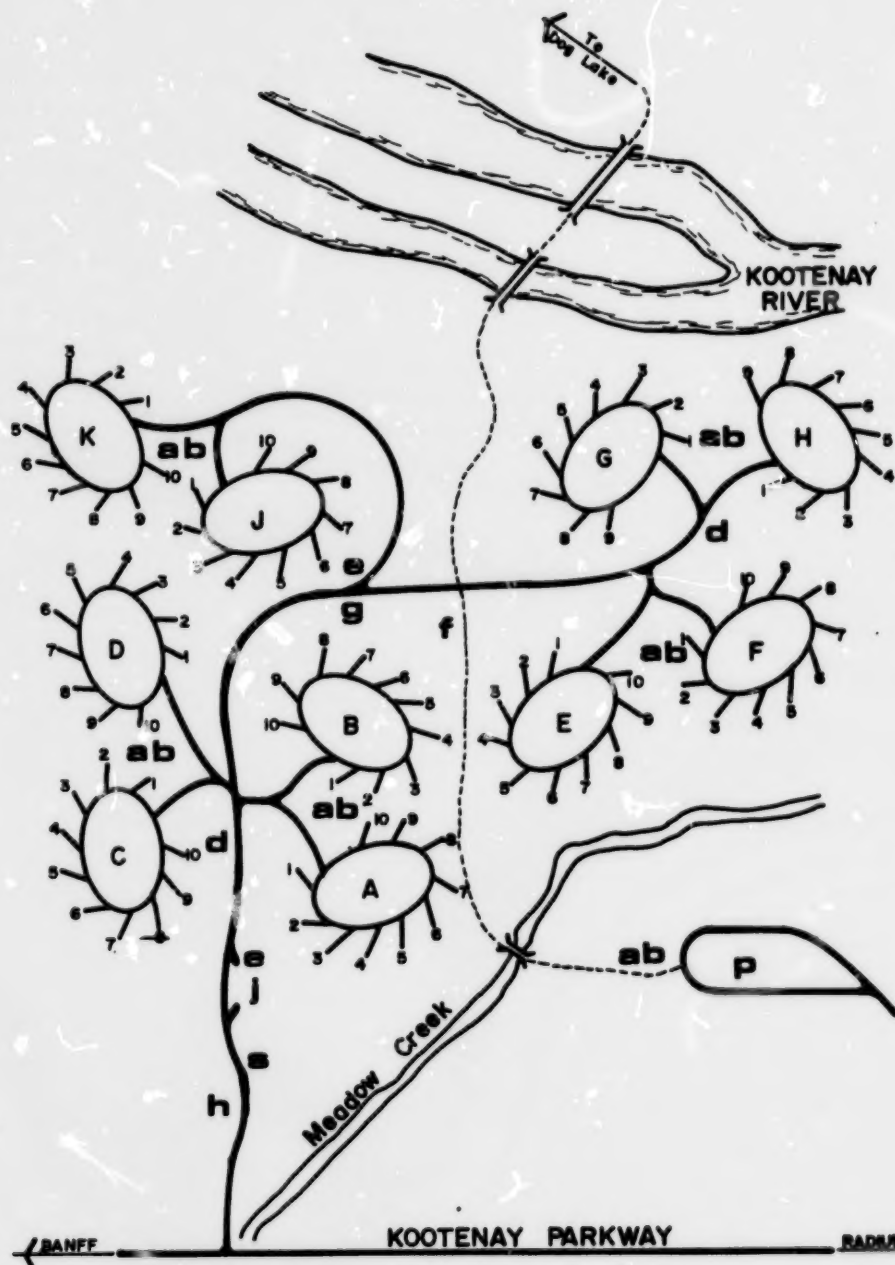
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WESTERN REGION CAMPGROUND REPORT

LEGEND

Kitchen Shelter	- a
Washrooms	- b
Well / Water Standpipe	- c
Wood Bin	- d
Garbage	- e
Outdoor Theatre	- f
Kiosk	- g
Residences	- h
Play Area	- i
Trailer Dump Station	- j
Trail	- k
Fire Circle / Pit	- l
Parking	- m
Telephones	- n
Showers	- o
Picnic Area	- p
Food Storage	- q
Signs	- r
Viewpoint	- s
Handicap Washroom	- t



McLeod Meadows Campground - KOOTENAY



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WESTERN REGION CAMPGROUND REPORT

ENVIRONMENT CANADA - PARKS

WESTERN REGION

PROJECT BRIEF

MCLEOD MEADOWS CAMPGROUND

KOOTENAY NATIONAL PARK

PREPARED BY: V. L. Herzog

DATE: January 1989..... REVISION NO. PROJECT NO.

EXECUTIVE SUMMARY:

As part of the Regional Campground Study, McLeod Meadows Campground which consists of 98 semi-serviced sites was inventoried as to condition and recapitalisation requirements. This Project Brief sets forth a recapitalisation plan for the campground. The scope of work includes site rehabilitation, building renovations utility improvements, road repair and site furnishings.

Note: For the purposes of saving costs and bulk all appendices mentioned in the Campground Study are held as one copy in A&E Services, Western Region.

APPROVALS:

CLIENT

F. Bamber
Superintendent

Date

C. Bjorgan
Chief Visitor Services

Date

ARCH. & ENG.

L.G. Blight
Director

Date

T. C. Arnett
Coordinator
Terrain Development
Division

Date



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

A. INTRODUCTION

As part of the Regional Campground Study, McLeod Meadows Campground was analysed as to condition and requirements for recapitalisation.

B. SCOPE OF PROJECT

The project brief identifies work which is required for building, utility and campsite work in order to bring them to national Standard. The existing Campground Manual PM 40 - 4 is being revised in order to bring it in line with current recapitalisation practice.

C. OBJECTIVES

The objectives are to upgrade the campground to a presentable and functional state, and to improve the buildings and sites to National Building Code standards.

D. URGENCY

The urgency was established by review of the condition report, site analysis, and park prioritization. These reports, indicated that most of the work required is of an immediate priority (work needed in the next on to five years). In most cases the work is required within the next two years.

E. JUSTIFICATION

McLeod Meadows Campground is in relatively good shape. Minor user requirements should be addressed. Items such as sites oriented towards the bicyclist, improved trail surfacing, dust control on the roads, and tent pad upgrading should be addressed.

There are upkeep problems, that unless addressed, will result in deterioration of the campground plant. Examples of these items are septic field upgrades, re-roofing buildings, and water system improvements.



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

E. JUSTIFICATION continued

In addition, there are a number of operational issues which will result in A&E input if approved. These issues should be addressed in the Visitor Services Planning exercise. An example of this would be, on site staff housing requirement for the Campground.

F. OPTIONS

Concerns are expressed about the Kootenay River Erosion which will eventually eliminate Loops HJK & I of McLeod Meadows Campground. An engineering study and cost benefit analysis is required in order to determine whether Rip Rapping the bank of the river verses reconstructing the Loops elsewhere would be more viable. There are varying opinions as to the course of action to be taken. The differences could be addressed with an Engineering Study which would indicate overall costs and long term erosion effects of Rip Rapping the bank. This should be compared with construction costs of relocating the loops elsewhere, and whether or not the sites are required. (Note: That there has been an approximate vacancy rate of 42% during the combined months of July & August in 1988. This shows a marked increase in camping at McLeod Meadows over recent years.)

The location of staff at McLeod has been a subject of some debate for considerable time. Costs shown in this Project Brief are for retaining the Staff in residence at the Campground.

Bicyclists and River/rafters would most probably be able to make do with a site meant for others. It would be preferable, from a visitor standpoint to provide them with sites more amenable to the bicycling/rafting camper. To this end a small group camping area shall be constructed.



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

F. OPTIONS continued

A concern which should be addressed is the fire hazard posed by the blow down in the campground. It is not economically feasible to remove all the blow down in the campground, and therefore there is an identified need for an evacuation and fire control plan for the campground. A Fire Management Plan has been initiated by the park. This campground is also a single access campground, an alternative access for evaluation purposes should be investigated.

On a positive note, the blow down is extremely successful in keeping campers close to their sites and on trails. This is evident in the fact that McLeod Meadows is one of the least trampled of the Western Region Campgrounds.

G. SOCIO - ECONOMIC INFORMATION

McLeod Meadows Campground is a semi - serviced Campground of some 98 sites. As there are no major activities in close proximity, (There is some hiking due to the fact the Dog Lake Trail Head is located in the Campground.) it serves a transient visitor population between attractions in Banff and the Radium Area.

One of the major activities along the Kootenay Parkway, adjacent to which McLeod Meadows is located, is bicycling. McLeod Meadows sees a fair number of campers who are bicyclists as a result. In order to meet user demand a good user analysis is required in order to focus on this group's needs relative to what services McLeod Meadows provides.

In addition, there is some use of the Campground as an overflow. Since McLeod Meadows is located 34 kilometres from Radium Junction, it attracts those who can't find accommodation in the Radium area, or who are unwilling, or unable to pay the Private Campground prices in that area.



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WESTERN REGION CAMPGROUND REPORT

2.0 GENERAL INFORMATION

A. BACKGROUND

McLeod Meadows Campground is located in Kootenay National Park, approximately 34 kilometres from Radium Junction. It serves a mainly transient camping group with some hikers using it as a base for their backcountry hikes.

The required improvements were documented from on site inspections and meetings to review and identify the problems within the Campground. The Park and Landscape Architect prepared a preliminary User Requirements Check List. These were prioritized. a condition analysis was carried out concurrent with the User Requirements Check List, and was integrated into a list of requirements which are found at the back of this Project Brief.

B. SOURCE OF INFORMATION

Kootenay National Park

Visitor Services
General Works
Warden Service
Interpretation

Campground Analysis

Jasper Field Crew
A&E Services
Western Region

Reports and Manuals

A&E Services
Water Supply Study for
Western Region's Campgrounds

Four Mountain Parks
Management Plan
CPS, Western Region Planning

Draft Visitor Activities
Management Plan for Kootenay
CPS, Western Region

Campground Manual

PM 40 - 4 being revised



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WESTERN REGION CAMPGROUND REPORT

2.0 GENERAL INFORMATION

C. GENERAL CAMPGROUND CRITERIA

Design Criteria (from Parks Canada Campground Manual)

Semi Serviced (Level 2)

- . Tent and trailer camping with no utility hook ups
- . Centralised sanitary water and sewage disposal facilities provided

Density of Campground: 8 - 18 sites/hectare

People/Campsite 1 - 8 people/campsite

Capacity: 98 campsites

3.0 REQUIREMENTS AND CONSTRAINTS

A. MAJOR WORK ITEMS

i. Buildings

- . Reroof buildings
- . Grab bar replacement, miscellaneous repairs
- . Light source correction toilet buildings
- . Staff housing issues
- . Stoves required in some shelters
- . Lockers for Food Storage Building
- . Improve noisy generator required for Theatre Lighting
- . New shower building

NOTE: That further assessment of the building component will be required by the A&E Architectural Group prior to a final building estimate being developed. All estimates given for buildings herein are 'D' level estimates.

ii. Utilities

- . Well pressure water system
- . New septic field for loop A/B Toilet Building, check septic tanks and fields all buildings
- . Design and install waste water disposal units



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WESTERN REGION CAMPGROUND REPORT

3.0 REQUIREMENTS AND CONSTRAINTS

A. MAJOR WORK ITEMS continued

iii. Roads

- . Chipseal existing road (recommend 2 coats on a ten year cycle)

iv. Landscaping

- . Loosen tent pad material
- . Asphalt existing paths, and improve path systems around buildings
- . Rip Rap Kootenay River Bank
- . Walking Sites for Cyclists
- . Screen Theatre Propane Tank

v. Interpretation

- . Orientation signage and interpretative media at campground entrances should be considered as part of the visitor services plan

vi. Operations and Maintenance

Operations and Maintenance is a recurring cost. At this time the major issues which impact on this activity are the road chipsealing, the well water pressure system and the septic tank/field investigation. Relocation of the generator for the Theatre may also effect operations.

4.0 PROJECT MANAGEMENT

A. ORGANISATION

Project Officer

A&E Services,
Western Region

Park Staff

F. Bamber
Superintendent

C. Bjorgan
Visitor Services

K. Slovak
General Works

P. Whyte
Wardens Service

I. Jack
Interpretation



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WESTERN REGION CAMPGROUND REPORT

4.0 PROJECT MANAGEMENT

A. ORGANISATION continued

Asset
Management

Jasper Field Crew
A&E Services, Western Region

B. PROCUREMENT STRATEGY

The project work shall be broken out into three components covering Buildings, Landscape and Road Work, and Utilities.

Buildings

Consultant and In House Design
In House Supervision,

Utilities

Consultant and In House Design
In house and Consultant Supervision

Landscape &
Road Work

Consultant and In House Design

C. SCHEDULING

1987/88

Condition Analysis

1988/89

Project Brief

1989 ___ \

Year 1 - Minor Building Construction

Building, Landscape, & Utility Design

Year 2 - Building, Landscape, & Utility Construction

Landscape & Road Work Design

Future - Landscape & Road Work Construction

D. FUNDING CLASS 'C' ESTIMATE - 1988\$

<u>Buildings</u> (Class D)	<u>Year 1</u>	<u>Year 2</u>	<u>Future</u>
Construction	2.7	25.0	200.0
Design	5.0	30.0	
Contingency 20%	1.5	10.4	
Risk 20%	1.5	10.4	
Engineering	5.0	30.0	



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WESTERN REGION CAMPGROUND REPORT

4.0 PROJECT MANAGEMENT

D. FUNDING CLASS 'C' ESTIMATE - 1988\$

<u>Utilities</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Future</u>
Construction		70.0	
Design	17.0		
Contingency 15%	1.8		
Risk 20%	2.4		
Engineering	.5	20.0	
<u>Landscape & Road Work</u>			
Construction	.2	320.0	348.1
Design	38.4	(43.8)	
Contingency 15%	5.8	54.5	52.2
Risk 20%	7.7	72.2	69.5
Engineering	5.5	35.0	20.0
TOTAL	94.5	731.8	689.8



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
1. Buildings							
Kitchen Shelter/Toilet Building - replace with new Cedar Shake roofs	1	5 bldg	2.5000		12.5		
Replace grab bars in disabled washroom	1	1 bldg	.2000		.2		
Miscellaneous building repairs eg. painting, screens, windows	1	5 bldg	.2000		1.0		
Investigate light source problem in Kitchen Shelter/Toilet Buildings eg. Skylight, new luminaires other alternatives.	1	1 invest	1.0000	1.0			
Staff Trailer. Make decision re repair or remove							
. New roof existing collapsing & leaking	1	1 roof	4.0000		4.0		
. Paint	1	1	.6000	.6			
Alternative: not reflected in final costs, given for info.		remove trailer					3.0
Alternative: not reflected in final costs, given for info.		remove and reconstruct trailer					60.0
Staff House Reroof including roof sheathing & shakes	1	1	3.0000		3.0		
Minor Painting Theatre	1	1	.1000	.1			
Propane Tank - theatre requires protection & screening to meet code	1	1	1.5000		1.5		



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
Replace stoves in some shelters	1	3 bldg	.8000		2.4		
New shower building	2	1 bldg	200.0000			200.0	
Lockers required for food storage building	2	20 lockers	.2000		.4		
Lighting system which isn't noisy (ie generator going to 11:00pm) should be considered, or investigate relocation of generator further from theatre	2	1 system invest	1.0000	1.0			
Construction costs dependent on outcome of investigation							
Design				5.0	30.0		
Contingency 20%				1.5	10.4		
Risk 20%				1.5	10.4		
Engineering 1.8 x 55.5 x .35 PY				5.0	30.0		
2. Utilities							
Well supply pressure system	1	1 system	70.0000		70.0		
New septic field required Loop A&B	1	1 field	6.0000		6.0		
Two buildings share one field - other fields too may be overloaded, check all tanks investigate	1	1 study	5.0000	5.0			
Waste water disposal units - design proper unit and construct.	2	5 units	.8000		4.0		
Design				12.0			
Contingency 15%				1.8			
Risk 20%				2.4			
Engineering 1.8 x 55.5 .25PY				.5	20.0		



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
3. Landscape & Road Work							
Loosen Tent Pad material by incorporating sawdust into the existing pad material	1	98 sites	.4000			39.2	
Chipseal existing road (2 coats 10 year cycle)	3	3200 m2	.0008			25.6	
	1	250m2				2.0	
Existing gravel trails should be graveled - consider defining trails around buildings with asphalt.	2	1700m2 main tr.	.0025			42.5	
		1300m2 adjacent to bldgs.	.0025			32.5	
Orientation signage	1	30 signs	.3000			9.0	
Develop walk in sites for cyclists (consider converting Loop)	2	10 sites	1.5000			15.0	
Rip Rap Kootenay River to Prevent erosion of Loops JKH & I	1	400m	.8000		320.0		
Fire a concern due to blow down. (Note to the Positive - the campground is in good shape, since blow down keeps people on the path systems		Investigate feasibility of emergency access for fire evacuation				5.0	
Improve and grade spurs & sites	1	60	1.0000			60.0	
Chipseal loop roads (2 coats on ten year cycle)	1	250m2	.0008			2.0	
	3	7250m2	.0008			65.0	
Replace Table legs	1	2	.0075	.2			



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
Construct group camping area for bicyclists/rafters	2	1	50.0000			50.0	
Design				38.4	43.8		
Contingency 15%				5.8	54.5	52.2	
Risk 20%				7.7	72.7	69.5	
Engineering				5.0	35.0	20.0	
1.8 x 55.5							
.6 PY							
Construct sites for the disabled \$ are not included in overall costs as determining factors must be considered prior to cost figure levy finalised.	1	5	4.6				23.0
TOTAL				94.5	731.8	689.8	1515.8



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WESTERN REGION CAMPGROUND REPORT

MCLEOD MEADOWS CAMPGROUND KNP





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WESTERN REGION CAMPGROUND REPORT

Environment Canada
Canadian Parks Service

Environnement Canada
Service canadien des parcs

EARP REQUEST

Before an EARP can be initiated, the following information must be provided.
Your conscientious participation will assist in the environmental screening while ensuring that your project is not held up due to insufficient information.
If project is capital please attach a copy of the PIP form.

Project Title: Kootenay Campground Recapitalisation - Marble Canyon Campground

= FOR WARDEN SERVICE USE ONLY

= Person Requesting: V. L. Herzog

= EARP Registration No.: _____

= Agency: A&E Services, Western Region

= Project Warden: _____

= Title: Landscape Architect

= Date Received: _____

= Date Submitted: February 1989

= Completion Date Committed: _____

= Requested Completion Date: _____

Cost of Project: _____

Are Project Funds/PY identified: NO

The Issue: Marble Canyon Campground was inventoried as a part of the Western Region

Campground Study. It was determined that minor building improvements were required. In addition a disabled facility and shower facility were identified as new construction items. Water service and electrical service to the buildings should be improved. Minor campground and site improvements; and some major entry road improvements are proposed.

Proposal: A project to provide staff housing is currently in progress (EARPed previously).

Minor building improvements, campground, and site improvements would be within the bounds of existing plant. New building construction, and utility work would require disruption of environment within the campground. Entry Road improvements would require environmental disruption; however much of the work would be of a bioengineering nature.

Marble Canyon Campground - KOOTENAY

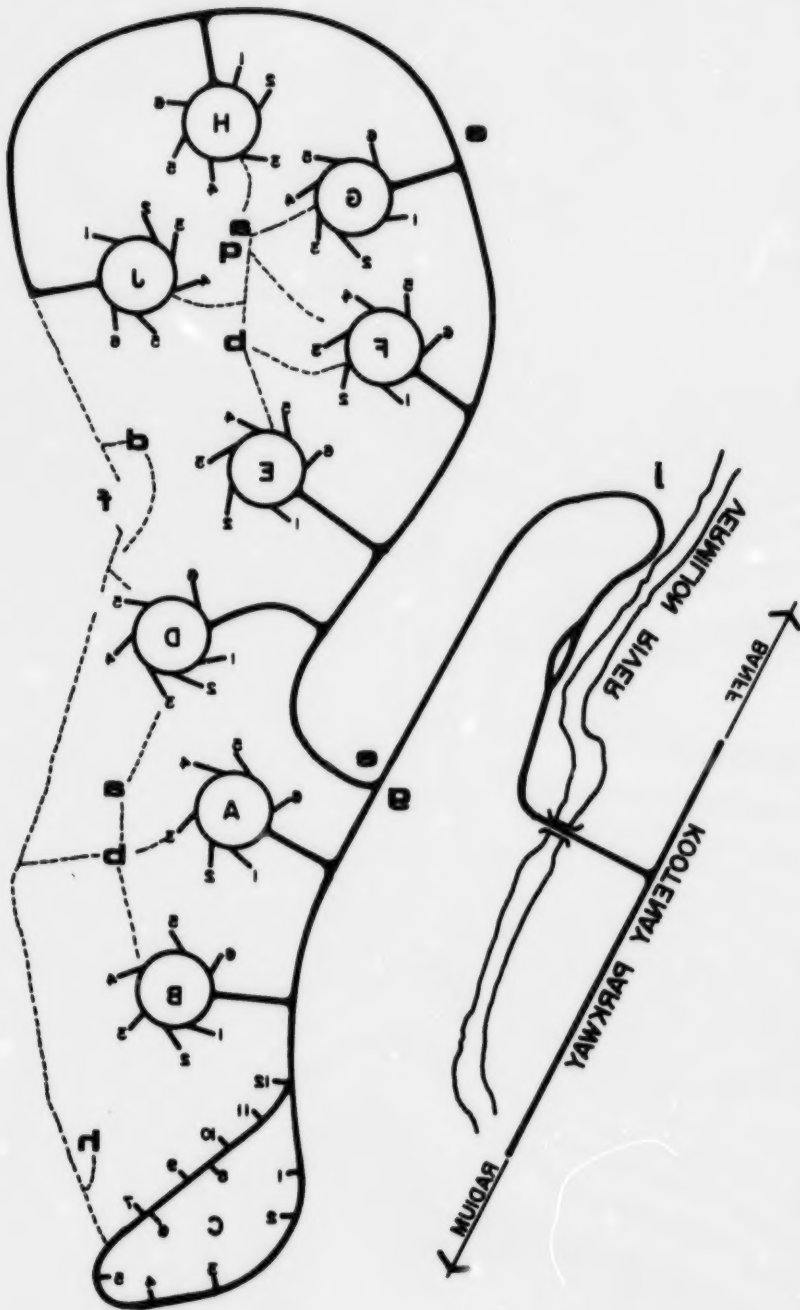
CAMPGROUND REPORT WESTERN REGION

Western Region
Région de l'Ouest
Environnement Canada
Environnement Canada
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LEGEND

- Handicap Washroom.....
- Viewpoint.....
- Signs.....
- Food Storage.....
- Picnic Area.....
- Showers.....
- Telephones.....
- Parking.....
- Fire Circle / Pit.....
- Trail.....
- Trailer Dump Station.....
- Play Area.....
- Residences.....
- Kiosk.....
- Outdoor Theatre.....
- Garbage.....
- Wood Bin.....
- Well / Water Standpipe.....
- Washrooms.....
- Kitchen Shelter.....





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WESTERN REGION CAMPGROUND REPORT

ENVIRONMENT CANADA - PARKS

WESTERN REGION

PROJECT BRIEF

for

MARBLE CANYON CAMPGROUND

KOOTENAY NATIONAL PARK

PREPARED BY:

V.L. Herzog

DATE: February 89

REVISION NO.

PROJECT NO.

EXECUTIVE SUMMARY:

As part of the Regional Campground study, Marble canyon campground which consists of 61 semi-serviced was inventoried as to condition and recapitalisation requirements. The project brief sets forth a recapitalisation plan for the campground. The scope of work includes site rehabilitation, building renovation, new building construction, road repair site improvements and site furnishings.

Note: For the purposes of saving costs and build all appendices mentioned in the Campground Study are held as one copy in A&E Services, Western Region.

APPROVALS:

CLIENT

F. Bamber
Superintendent

Date

C. Bjorgan
Chief Visitor Services

Date

ARCH. & ENG.

L.G. Blight
Director

Date

T. C. Arnett
Coordinator
Terrain &
Transportation Development

Date



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

A. INTRODUCTION

As part of the Regional Campground Study, Marble Canyon Campground was analysed as to condition and requirements for recapitalisation.

B. SCOPE OF PROJECT

The Project Brief identifies work which is required for building, utility and campsite work in order to bring them to National Standards. The existing Campground Manual PM 40 - 4 is being revised in order to bring it in line with current recapitalisation practice.

C. OBJECTIVES

The objectives are to upgrade the campground to a presentable and functional state, and to improve the buildings and sites to national building codes and standards.

D. URGENCY

The urgency was established by review of the condition report, site analysis, and park prioritization. These reports, indicated that most of the work required is of and immediate priority (work needed in the next one - five years). In most cases the work is required within the next two years.

E. JUSTIFICATION

The campground is in very good shape as a whole. However; there are requirements that have been addressed elsewhere and those that are inventoried herein.

The A&E Services, Contemporary Architecture Section has reviewed the staff housing requirements thoroughly. With a great deal of input from the Park this has culminated in project 87680. Construction of the Staff Housing is scheduled for a 1989/90 start.



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

E. JUSTIFICATION continued

The Amphitheatre should have some structural investigations done by A&E Services Architectural section, as the visual inspection which was carried out as a result of this study, identified heaving of the slab, cracks, and separation of platform sections from the foundation.

Minor building repairs are identified for the kitchen shelters, toilet buildings, and the food storage structures.

In addition to these building requirements, a facility for the disabled is identified.

Upgrading of the Water System was identified in the Water Supply Study for Western Region's Campgrounds conducted by A&E Services, Engineering Section. Its recommendation is that the existing system be converted to a well pressure system.

The buildings were wired at some time in the past. However; they were not hooked up to any power source. Since they have functioned this way for some time, it is possibly not of the highest priority to have them hooked up at this time. This brief identifies the costs for hooking up the buildings to a power source.

The major road requirement is for widening of the main entry road. The major problem is of a very damp slope which is continually slipping. The road has been continually narrowed for years due to this fact. Bioengineering and a combination of road engineering would help to improve matters in this area.

Upgrading of the service roads around the Toilet Buildings is required. This is a minor item, but should be attended to.



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WESTERN REGION CAMPGROUND REPORT

1.0 PURPOSE

E. JUSTIFICATION continued

In addition, other site work which should be looked at due to this investigation are the wood bins, stove bases, and tent pad material.

Fire hazard is also a concern in this campground since it is a single access facility, the possibility of providing an emergency exit for evacuation purposes should be investigated.

The Draft Visitor Activities Management Plan identifies the need of facilities for hikers and back packers in this area in the shoulder season. Since the services are not underground the inclusion of a pump out privy and a well are a requirement in order to meet these Visitor Activities Management Plan objectives.

F. SOCIO - ECONOMIC INFORMATION

Marble Canyon Campground is located approximately 17 kilometres South from Castle Junction and 86 kilometres North from Radium Hot Springs on the Banff Windermere Highway. It is a semi serviced campground with no electrical hook ups and dual purpose tent and trailer sites. The majority of the population is overnight transient, with perhaps slightly more destination camping at this campground than its counter part at McLeod Meadows. The Campground had a vacancy rate of 25.4% and 32.6% in July and August 1989 respectively.

2.0 GENERAL INFORMATION

A. BACKGROUND

Marble Canyon Campground is located in Kootenay National Park approximately 17 kilometres South from Castle Junction and 86 kilometres North from Radium Hot Springs on the Banff Windermere Highway. The required improvements were documented from on site inspections and meetings to review and identify the problems within the Campground. The Park and Landscape Architect prepared a preliminary User Requirements Check List. These were



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WESTERN REGION CAMPGROUND REPORT

2.0 GENERAL INFORMATION

A. BACKGROUND continued

priorized. A condition analysis was carried out concurrent with the User Requirements Check list and was integrated into a set of Requirements which is attached to this Project Brief.

B. SOURCE OF INFORMATION

Kootenay National Park

Visitor Services
General Works
Warden Service
Interpretation

Campground Analysis

Jasper Field Crew

Reports and Manuals

A&E Services
Water Supply Study for
Western Region's Campgrounds

Four Mountain Parks
Management Plan
CPS, Western Region Planning

Draft Visitor Activities
Management Plan for Kootenay
CPS, Western Region

Campground Manual

PM 40 - 4 being revised

C. GENERAL CAMPGROUND CRITERIA

Design Criteria (From Parks Canada Campground Manual)

Semi Serviced Level II sites

- . Tent and trailer camping with no utility hook ups
- . Centralised sanitary water and sewage disposal facilities provided.



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WESTERN REGION CAMPGROUND REPORT

C. GENERAL CAMPGROUND CRITERIA continued

Density of Campground: 8 - 18 sites/hectare
People/Campsite: 1 - 8 People/campsite
Capacity: 61 campsites

3.0 REQUIREMENTS AND CONSTRAINTS

A. MAJOR WORK ITEMS

i. Buildings

- . New staff housing
- . New shower and disabled facilities
- . Minor building repairs
- . Structural investigation of amphitheatre and possible repair

NOTE: That further assessment of the building component will be required by the A&E Architectural Group prior to a final building estimate being developed. All estimates given for buildings herein are 'D' level estimates.

ii. Utilities

- . Convert present water system to a well water pressure system
- . Hook up electrical to buildings

iii. Roads

- . Widen and use bioengineering on entrance road
- . Upgrade service roads to buildings



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WESTERN REGION CAMPGROUND REPORT

3.0 REQUIREMENTS AND CONSTRAINTS

A. ORGANIZATION continued

iv. Landscaping

- . Loosen tent pad material by addition of sawdust
- . Replace stove bases
- . Wood bins

v. Interpretation

- . Kootenay Park Management Plan identifies orientation signage as a part of its directive

vi. Operations and Maintenance

- . Operations and maintenance is a recurring cost. However; improvements to the water system should improve maintenance due to the fact that there will be much lower levels of silt in the water.

The addition of new buildings will mean an increase in cleaning services.

4.0 PROJECT MANAGEMENT

A. ORGANISATION

Project Officer

A&E Services
Western Region

Park Staff

F. Bamber
Superintendent

C. Bjorgan
Visitor Services

K. Slovak
General Works

P. Whyte
Warden Service

I. Jack
Interpretation

Asset
Management

Jasper Field Crew
A&E Service, Western Region



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WESTERN REGION CAMPGROUND REPORT

B. PROCUREMENT STRATEGY

The project work shall be broken out into three components covering Buildings; Landscape and Road Work and Utilities.

Buildings	Consultant Design In House Supervision
Utilities	In House Evaluation, Design & Report In House Supervision
Landscape & Road Work	In House Design and Supervision

C. SCHEDULING

1987/88	Condition Analysis
1988/89	Project Brief
1989 \	Year 1 - Staff Housing Construction
— /	Utility Design
	Year 2 - Building Design
	Utility Design & Construction
	Landscape & Road Work Design
	Future - Utility Construction
	Landscape & Road Work Construction

D. FUNDING - CLASS 'C' ESTIMATE - 1988\$

<u>Buildings</u> (Class D)	<u>Year 1</u>	<u>Year 2</u>	<u>Future</u>
Construction	212.9*	20.0	247.0
Design		51.0	
Contingency 20%	.5	10.2	37.4
Risk 20%	.5	10.2	37.4
Engineering		5.0	25.0
<u>Utilities</u>			
Construction		66.6	21.5
Design	10.0	2.0	
Contingency 15%	1.5	10.0	3.9
Risk 15%	1.5	10.0	3.9
Engineering	3.0	10.0	2.0



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WESTERN REGION CAMPGROUND REPORT

Landscape & Road Work

Construction		94.3
Design	13.4	
Contingency 20%	2.7	18.8
Risk 15%	2.0	14.2
Engineering	3.0	20.0
TOTAL	226.9	229.1
		543.2

* Major Costs of Risk, Contingency, and Engineering are covered in the estimate of Building Costs for the Staff Housing project.



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
1. Buildings							
Staff housing - project 87680 R0 Whiting	1	1 facility	207,6000	207.6			
Food Storage - Paint interior & replace doors	1	1 building	.7000	.7			
Miscellaneous Toilet Building repairs (possibly repaired since investigation)							
. Replace Septic tank cover	1	1	.2000	1.0			
. Cracked window	1	2	.1500				
. Replace eave trough	1	1	.1000				
. Cracked sink	1	1	.4000				
. Cracked vanity tiles	1	1	.1000				
. Replace toilet tank lid	1	1	.0500				
Miscellaneous kitchen shelter repairs (possibly repaired since investigation)							
. paint interior	1	1	.4000	.4			
. replace rain caps on chimney	1	1	.0025				
New shower bldg.	2	1 bldg	210.0000			210.0	
Amphitheatre may have structural problems - floor slab settling and cracked, wood face of platform is separating from concrete, two large cracks in concrete foundation wall (evident on inside and outside of the building)	1	1 invest. const. possible	3.0000	3.0			
Paint picture screen	1	1 screen	.2000	.2			



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WESTERN REGION CAMPGROUND REPORT

DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
1. Buildings continued							
Disabled facility	2	1	30.0000			30.0	
Pumpout, Toilet for shoulder season use	2	1	7,000		7.0		
Design					51.0		
Contingency 20%				.5	37.4		
Risk 20%				.5	37.4		
Engineering 55.5 x 1.8 x . PY				in staff estimate	5.0	25.0	
2. Utilities							
Upgrade water system to well supply pressure system	1	1	66.0000		66.6		
Install well & pump for Shoulder Season use	2	1	6.5000			6.5	
Electrical hookup of buildings	3	1 system	15.0000			15.0	
Design				10.0	2.0		
Contingency 15%				1.5	10.0	3.0	
Risk 15%				1.5	10.0	3.0	
Engineering 55.5 x 1.8 x . PY				3.0	10.0	2.0	
3. Landscape & Road Work							
New wood bins	1	4 bins	4.0000			16.0	
Upgrade tent pad material by incorporating sawdust	1	61 sites	.5000			25.5	
Rebuild service roads around buildings	1	12m2	.0150			.2	
Entry Road requires rebuild to allow for passing	1	900m2	.0500			45.0	



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DESCRIPTION OF WORK ITEM	PRIORITY	QUANTITY	UNIT COST	PHASING			TOTAL COST
				YR - 1	YR - 2	FUTURE	
2. Utilities continued							
Replace stove bases	1	35	.0750			2.6	
Orientation Signage						5.0	
3. Landscape & Road Work continued							
Investigate Additional egress for Fire Evac.							
Design					13.4	17.8	
Contingency 20%					2.7	18.8	
Risk 15%					2.0	14.2	
Engineering					3.0	20.0	
55.5 x 1.8 x . PY							
TOTAL				226.9	229.1	543.2	999.2



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MARBLE CANYON CAMPGROUND KNP

